

SPECIFICATIONS

- ELECTRICAL**
- 24VDC +/- 10%, 300mA with 1 S550B VH.
- ENVIRONMENTAL**
- Viewing Heads NEMA TYPE 4
 - Ambient Temperature S550B, S552B, S556B VH. -40° F to 122° F (-40°C to +50°C)
 - Case Temperature S550B, S552B, S556B VH. -40° F to 140° F (-40°C to +60°C)
 - S580 Fiber Optics VH. -65° F to 572° F (-54°C to +300°C)
- OPTICAL**
- IR 1.0°
 - UV 3.0°
- CABLE** (Between Viewing Head and Signal Processor)
- 4 conductor, #16AWG or #18AWG.
one wire shielded with braided shield for flame signal.
IRIS Part Number C328/C330

IR FLICKER IR HIGH PASS FILTERS

S511 & S512		S550	
LL	36 Hz	1	16 Hz
L	71 Hz	2	24 Hz
M	105 Hz	3	33 Hz
H	186 Hz	4	52 Hz
		5	75 Hz
		6	100 Hz
		7	155 Hz
		8	215 Hz

IR GAIN

IR Gain	0 - 699
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UV GAIN

UV Gain	0 - 99
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SPECTRAL RESPONSE

UV	190-215nm
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IRIS

FLAME MONITORING SYSTEM S55xB VIEWING HEADS



Model #	Type	Gas (Hydrogen, Propane, NG)	Gas Low NOx Burners	Oil (Heavy Oil - air & steam atom)	Low NOx Pulverized Coal
S550B	UV/Ge	Disc Excellent	Disc Good	Disc Excellent	Disc Excellent Sig Very Good
S552B	Ge	Disc good Sig Good	Disc None Sig Fair	Disc Very Good Sig Good	Disc Good Sig Good
S556B	UV	Disc Excellent Sig Very Good	Disc Good Sig Good	Disc Excellent Sig Poor	Disc Excellent Sig Very Poor

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WORLD LEADER IN FLAME MONITORING

S550B GENERAL DESCRIPTION

The IRIS Model S550B is a state-of-the-art flame monitoring viewing head utilizing two types of detectors: an IR (infrared) solid state sensor and a UV (ultraviolet) tube.

The S550B works with the latest version of the P520/P522/P531 and P532 signal processors. Like other viewing heads in the S5xx family of viewing heads, the S550B produces output pulse rates proportional to the flame signal strength; the pulse rates are displayed at the front panel of the signal processors. Unlike the other members of the S5xx family of viewing heads, certain parameters in the S550B viewing head can be selected or adjusted remotely from the front panel of the P520/P522/P532 signal processors. These parameters are:

- a) UV gain 0-99
- b) IR gain 0-699
- c) Filter Selection 1-8

Once adjusted, the new parameters are stored in EEPROM in the signal processor. If power is removed from the signal processor (which powers the viewing head) and reapplied, the signal processor then automatically re-sends the stored parameters out to the S550B viewing head. In addition, at the front panel of the signal processor the operator may also select "CAL", a semiautomatic mode which will help to speed up the S550B setup. Thus, the S550B is a dual-sensor viewing head where the gain and filter selections are adjusted and stored remotely by the P52x and P53x signal processors.

S552B GENERAL DESCRIPTION

The S552B is for IR sensing only. It is basically an S550B without UV capability. The P52x or P53x will be aware of which viewing head of the S55xB family is connected to it so that only those adjustments which are appropriate to the S552B will be made available to the operator. These adjustments apply to the S552B:

- a) Filter Selection 1-8
- b) IR gain 0-699

When it comes to features like "CAL", the operator is given only those choices which are appropriate. For example, the operator does not have to choose between calibrating with the UV sensor or the IR sensor; in "CAL" but is only offered the choice of calibrating with the IR sensor.

S556B GENERAL DESCRIPTION

The S556B is for UV sensing only. It is basically an S550B without IR capability. The P52x or P53x will be aware of which viewing head of the S55xB family is connected to it so that only the adjustment which is appropriate to the S556B will be made available to the operator:

- a) UV gain 0-99

When it comes to features like "CAL", the operator is only given those choices which are appropriate. For example, the operator does not have to choose between calibrating with the UV sensor or the IR sensor; in "CAL" but is only offered the choice of calibrating with the UV sensor or not.

COMPARISON WITH OTHER MODEL S5xx SERIES VIEWING HEADS

The S55xB uses a Germanium sensor for IR detection, like the S511 and uses a high-voltage vacuum tube sensor for UV detection, like the S506, but both sensors are in the same housing in the S55xB. The pulses from the UV and IR sensors are summed internally into a single pulse stream out to the signal processor.

A dual-LED digital display is used to indicate the first two digits of the signal processor, which indicates the pulse rate out of the S550B. It is visible at the rear of the viewing head housing. The UV sensor emits green digits and the IR sensor emits red digits. With a count rate of 1200 displayed at the signal processor the LED will display 12. This is very useful for aiming and sighting the viewing head. One can readily distinguish the differences by reading the LED and use this indicator to adjust the sighting to obtain a maximum pulse rate at the LED, and therefore a maximum reading at the signal processor.

Another difference from previous models is that the gain for each sensor and the selection of the filter for IR may be set remotely through the front panel of the P52x/P53x signal processors.

Another difference from the earlier S5xx family of viewing heads and the S55xB family is that the earlier viewing head family had only 4 high pass filters to choose from; the S55xB has 8 (See table on back).



- IRIS Dual UV/IR Viewing Head in single housing
- IRIS Auto/Manual Calibration
- IRIS Setting stored in EEPROM
- IRIS UV Spectral response 190 - 210nm
- IRIS IR Flicker - 8 High pass filters, 16 - 215 Hz
- IRIS Select IR, UV or both simultaneously
- IRIS NEMA 4X housing, Quick disconnect plug
- IRIS SELF-CHECK once a second, viewing head and signal processor

S550B Combination UV/IR Viewing head Attributes

- IRIS FM, CSA & NRTL/C Approved
- IRIS LED indicates flame signal strength for optimal sighting and UV/IR indication
- IRIS NEMA 7 housing available
- IRIS Compatible with all IRIS P52x and P53x series signal processor
- IRIS FlameTools compatible



S552B IR Only Viewing head
Adjustable IR Gain & Filter
Digital Signal Strength Display



S556B UV Only Viewing head
Adjustable UV Gain
Digital Signal Strength Display